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NATIONAL PHOTOGRAPHIC INTERPRETATION CENTER



basic imagery interpretation report

Kazan Airframe Plant Gorbunov 22 (S)

STRATEGIC WEAPONS INDUSTRIAL FACILITIES

USSR

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RCA-09/0028/80

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INSTALLATION OR ACTIVITY NAME				COUNTRY	
Kazan Airframe Plant Gorbunov 22 Kazan North Airfield				UR	
UTM COORDINATES	GEOGRAPHIC COORDINATES	CATEGORY	BE NO.	COMIREX NO.	NIEFR NO.
—	55-51-38N 049-06-55E 55-51-56N 049-07-57E				
MAP REFERENCE					
DMAAC. USATC, Series 200, Sheet 0165-1, scale 1:200,000					
LATEST IMAGERY USED			NEGATION DATE (If required)		
[REDACTED]			NA		

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ABSTRACT

1. (S/D) This report discusses activity observed at Kazan Airframe Plant Gorbunov 22 in the USSR from [REDACTED] and updates previous NPIC reports [REDACTED] and [REDACTED]. The report also briefly discusses activity observed at Kazan Airfield North, the test and flyaway field for the plant.
2. (S/D) Significant construction activity during the reporting period, including that still underway on the information cutoff date, increased the floorspace of the plant by 273,964 square meters for a total overall floorspace of 679,110 square meters. The majority of the new floorspace is attributable to the large new assembly building under construction which already contains approximately 259,000 square meters of floorspace.
3. (S/D) Kazan Airframe Plant Gorbunov 22 is the only known assembly facility for the TU-22M (BACKFIRE B) medium variable geometry bomber and for the IL-62 (CLASSIC) long-range passenger transport aircraft. Also the Modified BACKFIRE B prototypes are produced at this plant.
4. (S/D) This report includes a location map, ten annotated photographs, and two tables of mensural and/or chronological data.

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BASIC DESCRIPTION**Construction Activity**

5. (S/D) Construction activity during the reporting period at Kazan 22 and its associated airfield (Figure 1) was largely production related with the majority of new floorspace (approximately 259,000 square meters) attributable to construction on the still incomplete assembly building on the eastern side of the north plant area (Figures 2 and 3). The remaining 17,289 square meters of new floorspace was included in seven buildings and one addition to an existing building (Figure 3). The following paragraphs are a detailed chronology of construction activity observed between [REDACTED] The numbering system supersedes that used in previous NPIC reports [REDACTED]

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6. (S/D) In 1978 only one building, a laboratory/engineering building, (item 17, Table 1 and Figure 3) was completed. However, construction continued at a brisk pace on the large new assembly building (item 44, Table 1 and Figures 3 and 4) with external construction being completed on an administration/engineering section (item 44a), a connecting building (item 44c), and two assembly/subassembly sections (items 44h and 44i).

7. (S/D) In 1979 several buildings were completed. A shop/support building (item 19, Table 1 and Figure 3), a storage/support building (item 18), a storage building (item 48), and a warehouse/shop building (item 50, Table 1 and Figure 3) were constructed. Construction continued on the large assembly building although no sections were externally completed in 1979.

8. (S/D) As of [REDACTED] no buildings had been completed, but several were under construction. A storage/support building (item 24, Table 1 and Figure 3), a probable storage/support building (item 28), and an addition to a workshop (item 43b) were in various stages of construction. An administration/engineering section (item 44b), Table 1 and Figure 4) and a connecting building (item 44d) of the large assembly building were also completed. Three assembly/subassembly sections (items 44f, l, and n), a probable assembly/subassembly section (item 44q), three engineering/shop sections (items 44g, m, and p), and a probable shop/support section (item 44e) were under construction on the information cutoff date. It is possible that construction will not end with these sections and that more sections will be added to the rear of the building in the same manner that sections n, p, and q are being constructed (Figure 4). These additions would significantly increase the final floorspace figures for the building. Functionally, the

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unfinished building currently contains [REDACTED] square meters of assembly/subassembly floorspace, [REDACTED] square meters of shop/support floorspace, and [REDACTED] square meters of administration/ engineering floor-space.

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9. (S/D) During the period of this report, four small storage buildings totaling 2,375 square meters were razed (Figure 3). Taking into account the razed buildings and buildings still under construction, the increase of floorspace at the building was 270,987 square meters as of [REDACTED] This increase brings the overall total of plant floorspace to 679,110 square meters.

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Miscellaneous Construction

10. (S/D) A new area is under construction outside the south plant area which may be related to either Kazan 22 or Kazan Aircraft Engine Plant 16 [REDACTED] and consists of an assembly building (tentatively 19,000 square meters) and a shop building [REDACTED] This new area is annotated as "New Construction Area" on Figure 3. Also, a new american-deck cooler (Figure 3), [REDACTED] long by [REDACTED] wide, had been completed by [REDACTED] Further, construction on a possible warehouse (item 53, Table 1 and Figure 3), which was reported in the last update, has not progressed significantly.

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Production Activity

BACKFIRE B

11. [REDACTED] This plant is the only known airframe assembly facility for the BACKFIRE B which is a Tupolev-designed, variable-geometry bomber with twin uprated NK-144 engines.⁴ Production is estimated to be 2.5 aircraft per month, about 30 per year.⁵ The number of BACKFIRE B observed at the plant during the period of this report varied somewhat, but the overall increase, which occurred during the early part of 1980 and culminated in a high count of 19 BACKFIRE B aircraft observed on imagery of [REDACTED] was due at least in part to the large number of Modified BACKFIRE B aircraft present (6 on [REDACTED] Table 2 lists BACKFIRE B sightings at the plant.

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12. (S/D) There is some evidence that BACKFIRE B aircraft return to the plant periodically for maintenance/refurbishment and other reasons. For example, one or two of the early production model BACKFIRE B aircraft were at the plant for varying periods of time beginning as early as [REDACTED] These aircraft are distinguishable from the later production B model in that they have a vertical stabilizer tip pod and a dark-toned area on the leading edge of the vertical stabilizer.

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[REDACTED] However, although no COMINT information exists to link Kazan 22 and Komsomolsk Airframe Plant 126 [REDACTED], photographic evidence indicates a link between the two plants which could be BACKFIRE related. Two types of uniquely configured unidentified shipping containers have been observed at both plants in substantial numbers (Figures 6 and 7). The type 1 unidentified shipping containers (Figure 6) were present on [REDACTED] in the new small transshipment area (Figure 3) and thereafter frequently in numbers normally ranging from two to four. This shipping container is [REDACTED] at the highest point. The type 2 unidentified shipping containers (Figure 7) are [REDACTED] wide at the base, and [REDACTED] at the highest end and are observed in numbers similar to the type 1.

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14. (S/D) A third type of unidentified shipping container which could be air related or BACKFIRE related was observed only at Kazan and is temporarily designated type 3 unidentified shipping container (Figure 8). The base of this container is [REDACTED]

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Modified BACKFIRE B

15. (S/D) A Modified BACKFIRE B prototype was observed at Ramenskoye Flight Test Center (FTC; [REDACTED] on imagery of [REDACTED] Detailed reanalysis of previous imagery revealed that a Modified BACKFIRE B was at Ramenskoye FTC as early as [REDACTED] This aircraft subsequently burned in May 1978. A Modified BACKFIRE B was at Kazan 22 as early as [REDACTED] and probably flew to Ramenskoye FTC shortly thereafter. This was probably the first prototype produced at the plant. The Modified BACKFIRE B is characterized by the presence of reconfigured air inlets and a streamlined nose (Figures 9 and 10). The inlets are wedge shaped with rectangular air intake trunks similar to those on the US-produced F-15 fighter. The nose has been reconfigured so that the refueling probe housing no longer protrudes from the top of the nose.

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16. (S/D) Since the first Modified BACKFIRE B was observed on [REDACTED] the count has risen to six at the plant (Table 2). However, a total of at least eight Modified BACKFIRE B are currently in existence because same day coverage on [REDACTED] revealed one Modified BACKFIRE B at Ramenskoye FTC, one Modified B at Akhtubinsk FTC [REDACTED] and six at the plant. Such a large number of Modified BACKFIRE B prototypes at the plant is unusual for a test program and indicates that there are some problems with the aircraft. However, the fact that one was observed for the first time at Akhtubinsk FTC on [REDACTED] indicates that the test program is still underway and that the aircraft has moved into the weapons-test phase. The Modified BACKFIRE B is not yet in series production.

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Table 1.
Mensural and Construction Data, Kazan Airframe Plant Gorbunov 22
(Keyed to Figures 2, 3, and 4)
This table in its entirety is classified SECRET//WNINTEL

Item						Item					
Description/ Function		Dimensions*			Remarks	Description/ Function		Dimensions*			Remarks
		L	W	H				L	W	H	
1	Shop/stor bldg				(4)**	f	Assembly/subassembly sec				Late stage of construction
2	Shop/stor bldg				(6)**						as of
3	Admin/shop bldg				(9)** 2 stories	g	Engr/shop sec				Late stage of construction
4	Elec power substation				(11)**						as of } stories
5	Shop bldg				(12)**	h	Assembly/subassembly sec				
6	Shop bldg				(14)**	i	Assembly/subassembly sec				
7	Support bldg				(13)**	j	Engr/shop sec				Appeared to be
8	Warehouse				(1)Δ						externally complete
9	Warehouse				(21)**						prior to Apr 78
10	Stor bldg				(2)Δ	k	Assembly/subassembly sec				
11	Workshop				(3)Δ	l	Assembly/subassembly sec				Early stage of construction
12	Stor bldg				(4)Δ						as of
13	Stor bldg				(6)Δ	m	Engr/shop sec				Multistorey, probably 5
14	Admin bldg				(28)*						(floorspace figure tentative)
15	Workshop				(7)Δ	n	Assembly/subassembly sec				
16	Prob shop bldg				(8)Δ	p	Engr/shop sec				5 stories
17	Lab/engr bldg				(18)** 3 stories	q	Prob assembly/ subassembly sec				
18	Stor/spt bldg				(17)**	45	Workshop				(56)Δ
19	Shop/spt bldg				(9)Δ	46	Shop bldg				(24)**
20	Stor bldg				(12)Δ 4 stories	47	Subassembly bldg				(39)Δ
21	Admin/engr bldg				(14)Δ	48	Storage bldg				
22	Workshop				(17)Δ	49	Workshop				(45)Δ
23	Workshop				Observed ucon	50	Warehouse/shop bldg				(30)** see figure 4
24	Stor/spt bldg				(24)* previously referred	a	Admin sec				4 stories
25	Prob dining hall				to as admin/eng	b	Shop/stor sec				2 stories
26	Stor bldg				(22)**	51	Transshipment bldg				(77)Δ see figure 4
27	Warehouse				(18)Δ	52	Shop bldg				(3)*
28	Prob stor/spt bldg				Observed ucon	53	Poss warehouse				(32)** footings were under
					early stage of construction						construction as of
					as of	54	Engr bldg				(92)Δ 4 stories
29	Machine shop				(20)Δ	55	Workshop				(96)Δ
30	Foundry				(21)Δ	56	Quonset stor bldg				(6)*
31	Workshop				(22)Δ	57	Quonset stor bldg				(6)*
32	Quonset stor bldg				(22)*	58	Quonset stor bldg				(6)*
33	Shop bldg				(21)*	59	Workshop				(95)Δ airfield related
34	Forge/foundry bldg				(25)Δ	60	Hangar				(93)Δ airfield related
35	Storage bldg				(26)Δ	61	Stor/spt bldg				(7)*
36	Admin bldg				(27)Δ 2 stories	62	Admin bldg				(87)Δ
37	Admin bldg				(29)Δ	63	Flt ops bldg				(83)Δ
38	Assembly bldg				(46)Δ	64	Quonset stor bldg				(9)*
39	Warehouse				(47)Δ	65	Support bldg				(82)Δ
40	Machine shop				(60)Δ	66	Hangar				(81)Δ
41	Shop bldg				(11)*	67	Control bldg				(79)Δ
42	Machine shop				(64)Δ	68	Stor bldg				Previously unnumbered
43	Workshop				(69)Δ	69	Stor bldg				Previously unnumbered
a	Shop sec				Observed ucon	70	Stor bldg				Outside plant boundary
b	Shop addition				late stage of construction	71	Stor bldg				(75)
						72	Vehicle maint bldg				(2)* 2 stories, airfield related
						73	Admin bldg				
44	Assembly bldg				(27)**		Unnumbered bldgs (26)				
a	Admin/engr sec				7 stories						Total floorspace constructed this period
b	Admin/engr sec				7 stories						Floorspace razed this period
c	Connecting bldg				2 stories						Net gain in floorspace since
d	Connecting bldg				2 stories						Current plant total
e	Prob shop/spt sec				2 stories; early stage of construction as of measurements approximate						

This numbering system supersedes those of

*Horizontal measurements are accurate to within

**Number in parenthesis equates to that superseded in report

ΔNumber in parenthesis equates to that superseded in report

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CLASSIC

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18. (S/D) A COMSAT Modified CLASSIC [REDACTED] was observed from [REDACTED]
 [REDACTED] at Kazan 22. The highest CLASSIC bort number observed throughout this reporting period

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Table 2.
Representative Production Aircraft Sightings
at Kazan Airframe Plant Gorbunov 22

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Date	BACKFIRE B	Modified BACKFIRE B	CLASSIC	
	6		2	[REDACTED] 25X1
	6		3	[REDACTED] 25X1
	4		2	[REDACTED] 25X1
				[REDACTED] 25X1
	6		3	
	8		1	
	5		3	
	5		1	
	7		0	
	5		1	
	5		1	
	7	1	0	
	8	1	0	
	9	1	1	
	8	2*	3	
	7	2	2	[REDACTED] 25X1
				[REDACTED] 25X1
	6	2	3	[REDACTED] 25X1
				[REDACTED] 25X1
	8	2	2	
	4	2	2	
	7	3*	1	[REDACTED] 25X1
	8	2	2	
	8	3	2	
	8	3	1	
		(prob)		
	7	3	2	[REDACTED] 25X1
	6	3	0	
	7	4*	0	
	6	4	2	[REDACTED] 25X1
	8	4	2	
	9	3	2	
		(prob)		
	5	5*	1	
	6	4	1	
	5	5	1	
	8	5	2	
	10	6*	2	
	11	6	3	
	12	6	3	
	9	6	4	[REDACTED] 25X1
	7	5	5	
	7	5	5	
	9	4	3	
		(prob)		
	8	6	3	

*Date on which a new high count of Modified BACKFIRE B was first observed.

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Kazan North Airfield

19. (S/D) Several types of aircraft which are not normally associated with Tupolev or Ilyushin have been observed at the airfield on the secondary runway (Figure 2). In addition to transports such as COLT, CRATE, and CAMP, there are several fighter aircraft. One FITTER A, one MOUJIK, and a MONGOL were observed during the reporting period. These aircraft are probably not associated with the plant and may be related to another air-related facility in the area.

REFERENCES**IMAGERY**

(TSR) All available KEYHOLE imagery acquired between [REDACTED]
[REDACTED] was used in preparation of this report.

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DMAAC. US Air Target Chart, Series 200, Sheet 0165-1, scale 1:200,000 (SECRET)

DOCUMENTS

1. NPIC. [REDACTED] RCA-09/0017/69, *Kazan Airframe Plant Gorbunov 22*, Jan 69 (TOP SECRET [REDACTED])
2. NPIC. [REDACTED] RCA-09/0013/76, *Kazan Airframe Plant Gorbunov 22*, Jan 76 (TOP SECRET [REDACTED])
3. NPIC. [REDACTED] RCA-09/0012/78, *Kazan Airframe Plant Gorbunov 22*, Jun 78 (TOP SECRET [REDACTED])
4. DIA. DST-18505-009-78, *Air Breathing Propulsion Technology - Warsaw Pact Countries*, 5 May 78 (SECRET/- [REDACTED])
5. DIA. DDB-1923-2A-79-SAO, *Foreign Aircraft Production (FOAP) Communist World*, Nov 1979 (TOP SECRET [REDACTED])
6. NSA. K/00/3443-78, *Wings for BACKFIRE Bomber Probably to be Produced at Plant 39, Irkutsk*, 181456Z April 1978 (TOP SECRET [REDACTED])
7. NSA. K/00/2230-75, *New Engine for the Soviet IL-62 (CLASSIC) Transport*, 071730Z 1975 (TOP SECRET [REDACTED])

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(S) Comments and queries regarding this report are welcome. They may be directed to [REDACTED] Warsaw
Pact Forces Division, Imagery Exploitation Group, NPIC, [REDACTED]

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